Acta arachnol., **41**(2): 149–152. December 23, 1992

A New Species of Eriophyid Mite Injurious to Tea Plant in Japan (Acari: Eriophyidae)

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上遠野冨士夫[1)]：日本の茶樹を加害するフシダニの1新種

Abstract A Japanese species of tea rust mite so far regarded as *Acaphylla theae* (WATT) or *A. steinwedeni* KEIFER is described under the name *A. theavagrans* sp. nov.

Since the anonymous report published in 1917, the Japanese tea rust mite was regarded as the same as *Acaphylla theae* (WATT, 1903) (=*Phytoptus theae* W.) originally described from India (*e.g.* MINAMIKAWA, 1950, 1957; MINAMIKAWA and OSAKABE, 1979; EHARA and KADONO, 1987). Recently, HUANG (1980) identified the same Japanese mite with *Acaphylla steinwedeni* KEIFER, 1943, known from California. However, I have come to the conclusion that the mite is neither *A. theae* nor *A. steinwedeni*, but a new species. It will be described and illustrated in this paper.

The abbreviations used here are the same as those explained in KADONO (1981).

Acaphylla theavagrans sp. nov.

[Japanese name: Cha-no-naga-sabidani]

(Fig. 1)

Phyllocoptes (*Phytoptus*) *theae* (*nec* WATT): anonymous, 1917, p. 122.
Phytoptus theae (*nec* WATT): MINAMIKAWA, 1950, p. 50.
Eriophyes theae (*nec* WATT): MINAMIKAWA, 1957, p. 153.
Acaphylla theae (*nec* WATT): MINAMIKAWA & OSAKABE, 1979, p. 236, fig. 101, p. 280; EHARA & KADONO, 1987, p. 23.
Acaphylla steinwedeni (*nec* KEIFER): HUANG, 1980, p. 291, pl. 133-C.

Female. Body fusiform, orange to orange yellow in color. Rostrum curved ventrally; anteapical seta forked apically, 17 μm long. Shield subtriangular in anterior outline; anterior lobe over rostral base; median line absent; admedian lines running in zigzag from anterior shield lobe to a point slightly posterior to

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Accepted November 10, 1992

the transverse level through shield setae, and curving inwardly each other at rear; transverse lines running from admedian lines at anterior 1/3 to lateral shield margin; irregularly curved lines present in the area surrounded by admedian lines and transverse lines from admedian lines; dorsal tubercles present ahead of rear shield margin; dorsal seta minute, directing upwardly. Foreleg without 1st coxal setae; tibial seta 4 μm long, arising from proximal 1/4 of the segment; claw strongly curved, with a large knob terminally; featherclaw divided deeply, with 3-rayed. Hindleg without patellar setae. Coxae almost smooth; first setiferous coxal tubercles absent; second coxal tubercles located at level before third tubercles; coxae touching each other. Abdomen with 30–34 tergites and 69–79 sternites; tergites smooth; sternites with microtubercles.

Genitalia 18 μm long, 25 μm wide; coverflap with 6–10 ribs anteriorly, with microtubercles basally. Seta *ls* on sternite 11–14, vs_1 on sternite 28–33, vs_2 on sternite 46–52, vs_3 on sternite 6 from rear. Mean (range in parentheses) in μm, length unless otherwise stated (n=10): body 209 (201–215), width 77 (68–85); shield 59, width 77; rostrum 31; foreleg 37, femur 11, patella 6, tibia 8, tarsus 8, claw 6, featherclaw 5; hindleg 35, femur 9, patella 5, tibia 7, tarsus 7, claw 5, featherclaw 5; setae *ds* 4, *ls* 14, vs_1 53, vs_2 43, vs_3 20, cxs_2, 12, cxs_3 31, *gs* 12, *acs* missing; intervals between setae: *ds–ds* 17, *ls–ls* 54, vs_1–vs_1 28, vs_2–vs_2 14, vs_3–vs_3 25, cxs_2–cxs_2 9, cxs_3–cxs_3 25, *gs–gs* 15.

Male. Similar to female except for genitalia. Abdomen with 29–30 tergites and 58–65 sternites; seta *ls* on sternite 9–12, vs_1 on sternite 21–25, vs_2 on sternite 33–41, vs_3 on sternite 6 from rear. Mean (range in parentheses) in μm, length unless otherwise stated (n=2): body 163 (162–164), width 64 (63–66); shield 47, width 64; genitalia 17, width 16.

Type series. Holotype: ♀, paratypes: 9♀♀ and 2♂♂, Kasai, Hyogo Pref., 10–VI–1992 (K. KASAMATSU), on the tea plant, *Thea sinensis* L. The type series is deposited in the collection of Chiba Prefectural Agricultural Experiment Station.

Distribution. Japan (Honshu); Taiwan.

Remarks. *Acaphylla theavagrans* sp. nov. is similar to *A. steinwedeni* KEIFER, 1943 (California), but differs from the latter in the shield having the apparent transverse lines from the admedian lines to the lateral shield margin and some curved lines outside the admedians. This new species also has a resemblance to *A. theae* (WATT, 1903) (WATT & MANN, 1903; India). However, judging from the original description of *A. theae*, the new mite differs from *theae* in having no rounded elevations on the central dorsum of the abdomen. An *Acaphylla* species living on tea plant in Taiwan was referred to *A. steinwedeni* by HUANG (1974). However, the Taiwanese mite should be assigned to *A. theavagrans* sp. nov.

Acknowledgments

I wish to express my heartfelt thanks to Professor Dr. S. EHARA, Tottori University, for his helpful comments on the draft of the paper. I also thank Dr. T. HAMAMURA, National Research Institute of Vegitable, Ornamental Plants and Tea, and Mr. S. KUBOTA, Shizuoka Tea Experiment Station for information about the new mite.

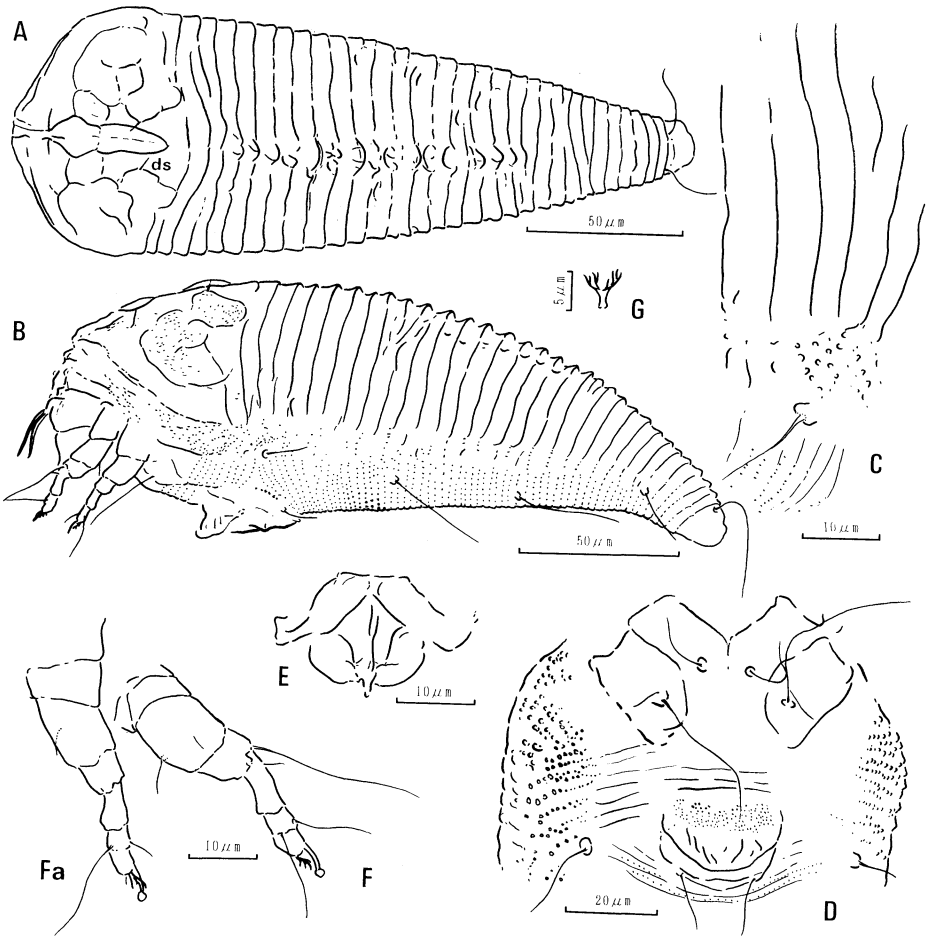

Fig. 1. *Acaphylla theavagrans* sp. nov.——A, Body, dorsal view, ds, dorsal setae; B, body, lateral view; C, side skin of abdomen; D, coxae and genitalia; E, internal genital structure; F, 1st leg; Fa, 2nd leg; G, featherclaw.

摘　　要

これまで *Acaphylla theae* (WATT) あるいは *A. steinwedeni* KEIFER と同定されてきたチャノナガサビダニが新種 *A. theavagrans* KADONO として記載された.

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